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⑤④ Food composition.

⑤⑦ There is described a food composition, which is mainly built-up on the basis of a mixture of at least one element from the group comprised of calcium caseinate, sodium caseinate and mixtures thereof.

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This invention relates to a food composition.

The invention has for an object to provide a composition which comprises the basis for a series of food products which may be used depending on the amount
5 water and/or milk being added thereto, to bake bread or to prepare waffles, cakes, pancakes, french fries puffed potatoes, pudding, ice cream or sauces mixtures.

The essential object of the invention is
10 to provide a composition which is to be used within the scope of a thinning method. Said method is based on the determination that when absorbing less carbohydrates than necessary for the daily life rhythm, the body loses stored fats ! Due to lack of carbohy-
15 drates in the blood, the body generates a "fat-breakdown substance" whereby the opposite way to fat building-up is followed. This means that the body will lose systematically stored fats until a normal fat ratio is reached in the body.

20 Now to use a number of carbohydrate-poor or carbohydrate-free substances, such as fish, meat, cheese, eggs, fats and some vegetables without any danger of fat build-up, it is required both feed-technique-wise and health-wise, that some dry addi-
25 tives be present, which substances should thereby further approximate the taste of bread, cake, waffles, etc.

To obtain such a result according to the invention, the food composition according to the invention is mainly build-up on the basis of a mixture which comprises at least one element from the group formed by calcium caseinate, sodium caseinate and the mixtures thereof.

Still according to the invention, the composition comprises a soya-bean derivate selected in the group which comprises full-fat soy-flour, fatless soyflour, isolated soy, soy concentrate, and mixtures of at least two such derivates, and said mixture further comprises one or a plurality of elements from the group formed by proteins originating from wheat, rice or corn, as well as wheat germs, carboxymethyl cellulose, alginates, cold gelatine, salt, pepper, vanilla, ice-cream, or coffee.

In an advantageous embodiment of the invention, the weight proportion of caseinate lies in the range of 40 to 80 weight % of the total weight of the composition, preferably 50 to 70 weight % of said total weight.

Other details and advantages of the invention will stand out from the following description of a food composition according to the invention. This description is only given by way of example and does not limit the invention.

The composition according to the invention provides products which are used as substitutes for bread, waffles, cakes, pancakes, fried foods, pudding, ice-cream and sauces. Up to now, said various compositions could only be obtained by making use of flour

and starches.

By using carbohydrate-free or carbohydrate-poor additives, with very suitable baking properties, there are now obtained various products which may be used as substitutes for bread, waffles, cakes and similar. Said additives are protein-rich components possibly supplemented with non-reacting fillers such as cellulose or crystalline cellulose; sugars such as pentosanes which do not react in the same way as conventional carbohydrates in the body. Equivalent high-value polysaccharides are guar gum, carob-bean flour, xanthane gum, alginates, carrageenates and similar products. Said various additives may be called "galacto-mannas".

A plurality of examples will be given hereinafter for compositions which may be used for the defined object. Said various types are various examples of possible embodiments.

Type I

1000 gr cold-soluble calcium caseinate
100 gr gluten
400 gr wheat bran
70 gr soy-flour, full-fat or fat-free
50 gr salt
10 gr ground coffee

Type II

1000 gr of a mixture from instant calcium caseinate
and instant sodium caseinate
100 gr gluten
400 gr wheat bran
70 gr soy-flour, full-fat or fat-free
50 gr salt

Type III

1000 gr of a mixture from equal parts sodium caseinate,
calcium caseinate, instant sodium caseinate
and instant calcium caseinate

- 5 100 gr gluten
 400 gr wheat bran
 70 gr soy-flour, full-fat or fat-free
 50 gr salt

Type IV

- 10 1000 gr instant calcium caseinate
 200 gr gluten
 400 gr wheat bran
 70 gr soy-flour, full-fat
 50 gr salt

15 Type V

1000 gr instant calcium caseinate
100 gr gluten
100 gr wheat germs
400 gr bran

- 20 70 gr soy-flour, full-fat
 50 gr salt

Type VI

1000 gr instant calcium caseinate
100 gr gluten

- 25 400 gr bran
 100 gr soy-flour, full-fat
 50 gr salt

Type VII

1000 gr instant calcium caseinate

- 30 100 gr gluten
 400 gr bran

70 gr soy-flour, full-fat
50 gr salt
30 gr mixture of curcuma and cloves

Type VIII

5 1000 gr instant calcium caseinate
100 gr gluten
350 gr bran
20 gr cellulose
70 gr soy-flour, full-fat
10 50 gr salt

Type IX

1000 gr instant calcium caseinate
500 gr soy-flour, full-fat
450 gr gluten

15 Type X

1000 gr instant calcium caseinate
500 gr full-fat soy-flour
450 gr gluten
50 gr soya-bean hydrolysate
20 50 gr salt
20 gr isolated soy
10 gr soya-bean concentrate

Type XI

1000 gr instant calcium caseinate
25 200 gr gelatine or cold gelatine
180 gr fat-free soy-flour
180 gr full-fat soy-flour
10 gr vanillin

Type XII

30 700 gr instant calcium caseinate
250 gr instant natrium caseinate

40 gr calcium caseinate
10 gr vanillin.

5 The combination of instant calcium
caseinate - milk protein - and bran is intended for
baking a carbohydrate-free small bread, in all possi-
ble shapes, whereby the bread taste remains. While
natural bread requires a rising agent to rise, gene-
rally this is baker yeast, with this preparation no
natural rising agent, nor synthetic or chemical rising
10 agent is required. The structure of the small bread
is obtained during the baking process and more parti-
cularly due to the typical property which instant
calcium caseinate imparts with a liquid such as water,
milk, eggs, fats or a combination thereof. The final
15 product is no substitute bread but rather a combina-
tion product thereof.

In the protein ratio instant calcium casei-
nate-wheat proteins, the first one acts as binder.

20 Soy-flour, full-fat or not, or in the isola-
ted form thereof, improves the crumb structure and
increases the bread taste. The wheat proteins-gluten -
are cold-binding and stiffen the dough, so that said
dough may be worked industrially (bread-wise). They
further act also to improve the bread taste.

25 The wheat brans increase with the protein
content thereof and considered as fillers, the food
value, while other fillers do not so. Wheat brans
increase the bread taste and add minerals on a large
scale. Both crystalline cellulose and brans may be
30 added to the composition.

Wheat germs size the dough. They also act

as provider of natural E vitamin, but they modify very slightly the baking properties.

5 Salt improves the moisture retention and improves the taste. Spices such as notably curcuma modify the bread taste.

 The preparation of the bread occurs without any addition of natural or synthetic or chemical yeast. All the ingredients for the preparation of the end product are added simultaneously or
10 separately. The addition of yeast products imparts no change to the formula.

1000 gr powder mixture

1000 gr egg product (egg, whole egg, albumen or egg portions in no-natural proportions)

15 500 gr water

200 gr butter or other fats, such as baking fats, lard, margarine, oil sorts.

 After being added together, said products are kneaded for a few moments until an homogeneous
20 dough is obtained. Nor the kneading period, nor the kneading rate have any influence on the structure of the end product. The swollen dough is baked inside an oven which has or has not been pre-heated. All possible baking shapes such as sandwiches, small round
25 bread, etc., are possible. The addition of fruit such as raisins, does not change in any way the structure, but actually the taste.

 The "small bread" has a comparable structure to bread, forms a firm crust, tastes as freshly-
30 baked bread. There is a definite resistance to chewing.

Preserving by deep-freezing of the baked small bread does not cause any structure change, nor a taste change after de-freezing.

Examples will be described hereinafter
5 of the preparation of cakes, waffles, pancakes, fritters, puffed potatoes, puddings and sauces.

The preparation of cakes or waffles occurs without any addition of natural or synthetic or chemical yeast. All the ingredients for the
10 preparation of the end product are added simultaneously or separately. The addition of yeast products does not impart any change to the formula.

1000 gr cake and waffle mix
2300 gr egg product (whole egg, albumen, egg yolk,
15 or portions in non-natural proportions)
250 gr butter or oil
250 gr whipping cream
50 gr sodium cyclamate in solution as sweetening agent

20 After being added together, the products are homogeneously mixed and are baked either as cakes in the oven during 10 minutes at 200°C, or as waffles in a waffle-iron. The addition of nuts or preserved fruit or similar, does not change in any way the end product.

25 The preparation of pancakes occurs without any addition of yeast in any possible form. All the ingredients for the preparation are added simultaneously or separately. The addition of yeast or changing the relative proportions causes no change
30 in the end product.

1000 gr pancake mix
1000 gr water
500 gr oil, butter or margarine
2000 gr eggs

- 5 After being added, the products are homogeneously mixed and they are baked as pancake.

The preparation of fritters and puffed potatoes occurs without any addition of yeast in any form. All the ingredients are added together simultaneously or separately. The addition of yeast or
10 changing the relative proportions causes no change in the end product.

1000 gr fritter mix
1500 gr eggs

- 15 300 gr butter, oil or margarine

All the products are mixed into an homogeneous mass and small balls are formed. Said balls are then in frying medium at 180°C during 3 minutes, or in a frying pan. Unbaked balls may be freezed and baked
20 as such.

The pudding is prepared in cold condition.

1000 gr pudding mix
3500 gr water
1000 gr eggs

- 25 500 gr whipping cream, 40%

100 gr synthetic sweetener

All the products are mixed into an homogenous mass and poured into small dishes or pudding moulds. They are kept for 30 minutes or more in a cold icebox.

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The preparation of the sauce occurs without any addition of yeast in any form. No binder

is added. The addition of sizing products such as carboxymethyl cellulose, etc. does not cause any change in the end product.

1000 gr sauce mix

5 750 gr eggs

750 gr whipping cream

1500 water

All the ingredients are mixed together and the sauce is heated to the boiling point.

10 1° - The cake and waffles have a light resilient structure, they are yellow in colour due to the addition of egg yolks, and they appear completely similar to the conventional cake and waffles. Preserving by deep-freezing does not change the
15% structure, nor the taste.

2° - The pancakes have a light resilient structure and they are completely similar to the composition under 1°.

20 3° - The fritters are lightly resilient and float during the baking process. They always go round in the frying medium, they are golden-yellow and taste midway between cake and baked potatoes. The size of the fritters or puffed potatoes has no influence on the end structure.

25 4° - The pudding has the resilient structure of a cooked pudding, but before being put in the icebox, it runs to dough-like, depending on the addition of the liquid amount,

30 5° - The sauce is whitish to yellow, homogenous and cold-binding. During heating, the sauce becomes less viscous. Directly before boiling,

the sauce thickens again.

It is clear that the invention is in no way limited to the above embodiments and that many changes might be brought thereto without departing
5 from the scope of the invention as defined by the appended claims.

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CLAIMS.

1. Food composition, characterized in that it is mainly build-up on the basis of a mixture of at least one element from the group comprised of calcium caseinate, sodium scaseinate and mixtures thereof.

2. Composition as defined in claim 1, characterized in that it comprises a soya-bean derivate selected in the group comprised of full-fat soy-flour, fat-free soy-flour, isolated soy, soy concentrate, and mixtures of at least two such derivatives.

3. Composition as defined in either one of claims 1 and 2, characterized in that said mixture contains gluten.

4. Composition as defined in any one of claims 1-3, characterized in that said mixture further comprises one or a plurality of elements from the group formed by proteins originating from wheat, rice or corn, as well as wheat germs, carboxymethyl cellulose, alginates, cold gelatine, salt, pepper, vanilla and coffee.

5. Composition as defined in any one of claims 1-4, characterized in that the weight proportion of caseinate lies in the range of 40 to 80 weight % of the total weight of the composition.

6. Composition as defined in claim 5, characterized in that the weight proportion of caseinate lies in the range of 50 to 70 weight % of the total weight of the composition.

7. Composition as defined in any one
of claims 2-6, characterized in that the weight
proportions of soya-bean derivative and gluten
each lie in the range of 5 to 25 weight % of the
5 total weight of the composition.

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